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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DONALD E. MABE, JR. and KARL E. ELLIOTT

Appeal 2009-005227
Application 10/680,535
Technology Center 3700

Decided: January 5, 2010

Before: JENNIFER D. BAHR, LINDA E. HORNER, and
FRED A. SILVERBERG, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL
STATEMENT OF THE CASE

Donald E. Mabe, Jr. et al. (Appellants) seek our review under 35 U.S.C. § 134 of the Examiner's decision rejecting claims 15-27, which are all of the pending claims. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We AFFIRM-IN-PART.

THE INVENTION

Appellants' claimed invention is a billiard cue. Spec. 1:6-7. Claim 15, reproduced below, is representative of the subject matter on appeal.

15. A billiard cue having a proximal portion and a distal portion, said cue comprising:

a grip located on the proximal portion of said cue,

a tip suitable for striking a billiard ball located on a distal end of said distal portion of said cue, and

wherein said distal portion comprises up to half of the length of said billiard cue and comprises substantially more than half of the weight of said billiard cue.

THE EVIDENCE

The Examiner relies upon the following evidence:

Morse	US 298,111	May 6, 1884
Bey	US 1,324,789	Dec. 16, 1919

THE REJECTION

Appellants seek review of the Examiner's rejection of claims 15-27 under 35 U.S.C. § 103(a) as unpatentable over Morse and Bey.

ISSUES

The Examiner found that Morse discloses a pool cue with weights added or removed from weight pockets along its length as deemed necessary to meet the requirements of the individual user and that although Morse may not explicitly teach how the weights should be distributed along the length

of the cue, Morse understands that it is desirable to alter the balance, feel and weight of the cue. Ans. 4, 10. Appellants contend that Morse does not teach or suggest that the distal portion of the cue includes substantially more than half the weight of the cue as required by claim 15. App. Br. 4-8.

The Examiner further found that because conventional cues meet the diameter variation limitations of claim 16-18, the claimed diameter variation would have been an obvious matter of design choice. Ans. 5, 11-12. Appellants assert that the diameter variation limitations of claims 16-18 are not a matter of design choice because conventional cues, such as the example provided by the Examiner, do not meet the diameter variation limitations of claims 16, 17, and 18. Reply Br. 5-6.

The issues before us are:

Have Appellants shown the Examiner erred in concluding that the combined teachings of Morse and Bey would have rendered obvious a billiard cue having a distal portion including substantially more than half the weight of the cue?

Have Appellants shown the Examiner erred in concluding the diameter variation limitations of claims 16-18 would have been an obvious matter of design choice?

FINDINGS OF FACT

We find that the following enumerated facts are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

1. Morse discloses a rod formed of a plurality of sections that may be screwed together to form a walking cane or a billiard cue. Morse 1:8-10; figs. 1, 2.
2. Morse discloses the sections may be taken apart for ease of transportation. Morse 1:10-12. Sections are joined with a screw-joint comprised of a screw *f* in the end of one section that threads into a cylindrical nut *g* in the end of the adjacent section, configured so that the cue is straight when the sections are screwed together. Morse 1:54-71; figs. 1, 3, 4, 5, 6.
3. Morse discloses that, embodied as a walking cane, the rod is comprised of two or more sections (e.g., sections A and B) of a suitable length. Morse 1:12-13, 41-43; fig. 2. In addition, the walking cane embodiment has a short removable section F that forms the tip for the staff. Morse 1:97-99; fig. 6. Adding two or three sections (e.g., sections C, D, and E) to the walking cane forms a billiard cue. Morse 1:43-46; figs. 1, 2.
4. Morse describes the end of the cue with the tip (distal end) as the “small end” and describes the opposite end of the cue (proximal end) as comprised of “larger sections.” Morse depicts the cue as noticeably tapered from the proximal to the distal end. Morse 1:18-21; fig. 1.
5. Morse discloses that the “larger sections” of the cue have weight pockets (cylindrical and axial holes) in the cue sections accessible through the cylindrical nuts *g* or *j* to accommodate interchangeable weights. Morse 1:20-22, 82-84; figs. 3, 4, 6. Morse illustrates an embodiment with weight pockets in the proximal and distal ends of section A and in the distal end of section B. Morse, figs. 3, 4, 6.

6. Morse discloses that the weights may be comprised of any mixture of heavy weights *h*, or light weights *i*, or alternatively, a single weight may fill the pocket. Morse 1:74-92. Screw-plugs *k* thread into cylindrical nuts *g* or *j* to hold the weights to prevent shaking when the cue is in use, and to prevent the weights from falling out when the sections are taken apart. Morse 1:87-90; figs. 3, 4, 6.
7. Morse discloses that the heavy weights *h* are fabricated of a heavy substance, such as lead, and light weights *i* are of a light substance such as wood or India-rubber. Morse 1:74-77. Both heavy weights *h* and light weights *i* may be of any shape, but are preferably adapted to fit in the cylindrical, axial weight pockets. Morse 1:78-84; figs. 3, 4, 6.
8. Morse discloses that the “weights may be employed in any desired number.” Morse 1:77-78. Further, through use of the weight pockets and weights, billiard players may change the weight and balance of the cue “to suit the requirements of any player,” and “to suit [a player’s] own peculiar way of handling, and to adapt the cue to the size of the table and the weight of the balls played upon.” Morse 1:20-24, 2:2-6.

PRINCIPLES OF LAW

“Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying

factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 550 U.S. at 407 (“While the sequence of these questions might be reordered in any particular case, the [Graham] factors continue to define the inquiry that controls.”) “[W]hen a patent ‘simply arranges old elements with each performing the same function it had been known to perform’ and yields no more than one would expect from such an arrangement, the combination is obvious.” *KSR*, 550 U.S. at 417 (quoting *Sakraid v. Ag Pro, Inc.*, 425 U.S. 273, 282 (1976)).

ANALYSIS

Claim 15

Claim 15 requires that the distal portion of the cue includes substantially more than half of the weight of the cue.

Appellants observe that Morse does not disclose dimensions for the cue and that the drawings are not to scale. App. Br. 6. Appellants assert that the Examiner’s rejection is in error because the Examiner has not demonstrated section A is at least as long as the combination of sections B, C, D, and E of Morse’s cue, and has not demonstrated that the weight pocket of the distal portion of section B is in the distal half of the length of the cue. App. Br. 5-6, 8.

Appellants have attempted to frame the issue as if the Examiner must show that a specific embodiment meets the claimed limitations. This is not the law for obviousness. A prior art reference is analyzed from the vantage point of all that it teaches one of ordinary skill in the art. *In re Lemelson*,

397 F.2d 1006, 1009 (CCPA 1968), *cited with approval in In re Heck*, 699 F.2d 1331, 1332-33 (Fed. Cir. 1983) (“The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all they contain.”). We look to what the disclosure of Morse teaches a person of ordinary skill in the art.

Morse discloses a rod that is formed into a plurality of sections joined by screw joints so that the rod is configurable as a walking cane or a billiard cue and may be disassembled into sections for ease of transportation (Facts 1, Error! Reference source not found.). The cane is comprised of two or more sections, with two or three sections added for conversion of the cane into a billiard cue (Fact 3). Morse discloses that sections of the rod contain weight pockets fillable with a variety of weights, to permit changes to the balance and/or weight of the cue to suit the user (Facts 5-8). Thus, Morse discloses a billiard cue comprised of multiple sections and teaches a technique of using weight pockets and weights in various sections of the cue to adapt the cue to a particular user. The fact that Appellants claim a cue where substantially more than half of the weight of the cue is in the distal portion of the cue does not patentably distinguish the claimed cue from the cue disclosed in Morse (as modified by Bey). Rather, Appellants’ claimed cue, having substantially more than half of the weight in the distal portion of the cue, is simply the predictable use of Morse’s weighting technique according to its established function to tailor a cue to suit a user.¹ *KSR*, 550

¹ Appellants’ Specification describes that “[i]t is desirable to provide billiard cues that can be customized *in weight*, length, grip, tip and shaft, particularly for more experienced players who demand high quality, and consistent equipment to play at a competitive level.” Spec. 2:5-8 (emphasis added).

U.S. at 417 (“a court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.”). Appellants have not presented convincing arguments or evidence to demonstrate that using Morse’s technique to make a cue having the weighting as claimed would have been beyond the skill of a person of ordinary skill in the art.

Appellants contend that Morse’s disclosure of using any combination of weights in the weight pockets of the cue does not contemplate an embodiment where the weight pockets are empty. App. Br. 7 (citing to Morse, 1:84-89); Reply Br. 4. We fail to see how Morse’s disclosure that “any number” of weights may be used (Fact 8) would exclude the use of no weights. A person of ordinary skill in the art would understand that because the user of the cue may choose “any desired number” of weights to “suit the requirements” of the user” and “to suit [the user’s] own peculiar way of handling”, the user may choose to use no weights in a particular weight pocket of the cue, such as, for example, section A of Morse’s cue (Fact 8). As such, Morse’s disclosure does not exclude a cue in which weights are placed only in the distal end of section B of the cue.

Appellants assert that because Morse’s cue tapers from a larger diameter at the proximal end to a smaller diameter at the distal end, and is made of the same material (wood) throughout, the distal portion of the cue would be lighter than the proximal half of the cue. App. Br. 7. This argument is not persuasive of error in the Examiner’s conclusion of obviousness because it focuses on the particular embodiment disclosed in Morse in which the weights are placed in the first and second proximal-most sections of the cue, rather than addressing the conclusion of obviousness based on the teaching of Morse to shift the weights to adapt the weight and

balance of the cue to suit the player's own particular way of handling the cue (Fact 8).

Further, Appellants argue that the Examiner has not demonstrated that sufficient weight(s) could be added to the distal end of section B to shift the weight into the distal portion of the cue. App. Br. 8. Appellants again rely too heavily on a single embodiment of Morse rather than addressing what the reference as a whole teaches a person of ordinary skill in the art.

Appellants assert that Morse does not provide a skilled person with any teaching, suggestion or motivation to adjust the weight of the cue to provide substantially more than half the weight of the cue in the distal half of the cue. App. Br. 9; see also Reply Br. 5. We disagree, as Morse discloses the weight and balance of the cue may be adjusted as desired "to suit the requirements of any player," and "to suit [the player's] own peculiar way of handling, and to adapt the cue to the size of the table and the weight of the balls played upon" (Fact 8).

Appellants have failed to demonstrate the Examiner erred in the rejection of claim 15.

Claims 16-27

Claims 16, 17, and 18 each depend from independent claim 15. Claims 16, 17, and 18 include the limitation that the diameter of the billiard cue varies up to 10%, 5%, and 2% (respectively) over the length of the cue.

The Examiner's conclusion that the diameter variation (taper) of the cue would have been an obvious matter of design choice is based in part on the finding that most conventional cues have a uniform diameter (varying less than 1%), providing as an example a cue 58" in length, with a tip (distal end) diameter of .515", and a butt (proximal) end diameter of 1.25." Ans. 4, 11-12.

We agree with Appellants that this example does not meet the diameter limitations of claims 16, 17, and 18. See Reply Br. 5-6. The diameter limitations of claims 16, 17, and 18 apply “over the length of the cue” so that the example provided by the Examiner has a diameter that varies approximately 58% over the length of the cue. See Reply Br. 6. Contrary to the Examiner’s finding, the diameter variation of a conventional cue significantly exceeds the claimed limitations of a variation of up to 10%, 5%, and 2%, undermining the Examiner’s conclusion of design choice. We cannot sustain the rejection of claims 16, 17, and 18. Because claims 19-27 depend, directly or indirectly, from claim 16, we also cannot sustain the rejection of these claims.

CONCLUSIONS

Appellants have not shown the Examiner erred in concluding that the combined teachings of Morse and Bey would have rendered obvious a billiard cue having a distal portion including substantially more than half the weight of the cue.

Appellants have shown the Examiner erred in concluding the diameter variation limitations of claims 16-18 would have been an obvious matter of design choice.

DECISION

We AFFIRM the Examiner’s decision to reject claim 15.

We REVERSE the Examiner’s decision to reject claims 16-27.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED-IN-PART

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